STATE OF MARYLAND

DHMH

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February 4, 2011

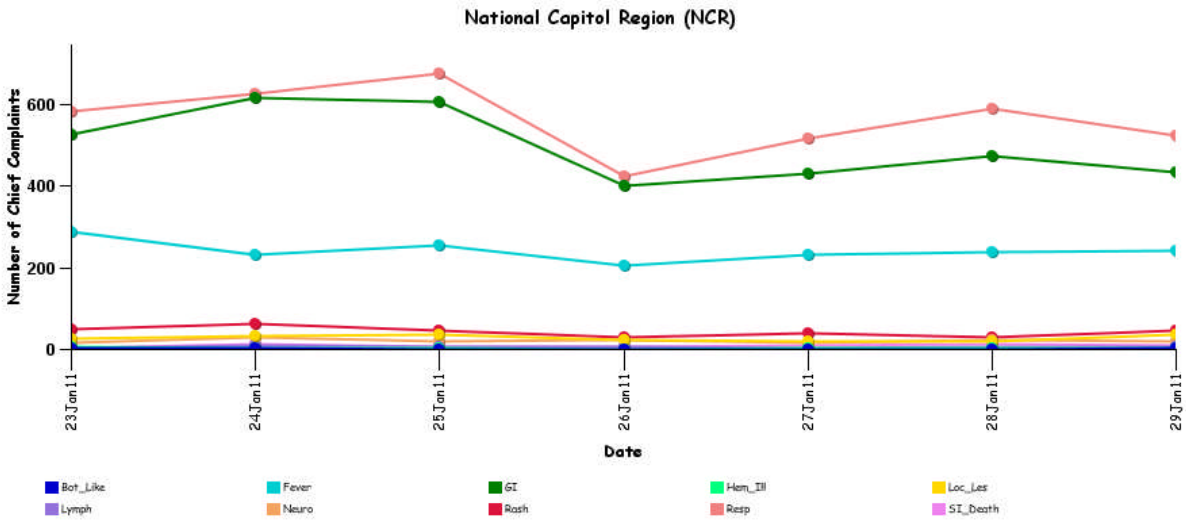
Public Health & Emergency Preparedness Bulletin: # 2011:04 Reporting for the week ending 01/29/11 (MMWR Week #04)

CURRENT HOMELAND SECURITY THREAT LEVELS

National: **Yellow (ELEVATED) *The threat level in the airline sector is Orange (HIGH)**
Maryland: **Yellow (ELEVATED)**

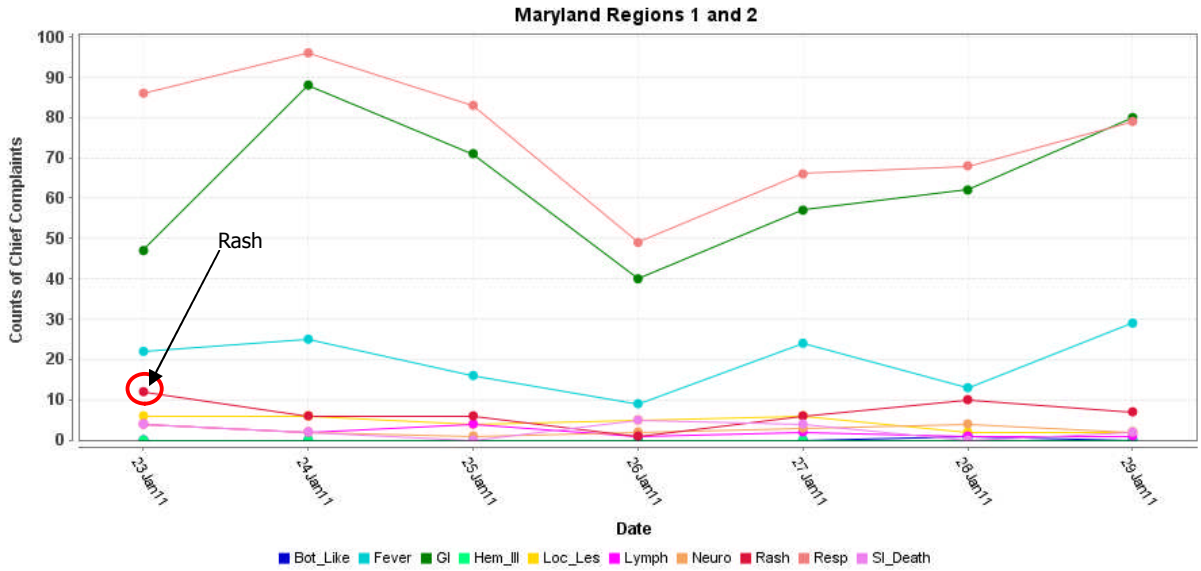
SYNDROMIC SURVEILLANCE REPORTS
ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):
Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts are circled. Red alerts are generated when observed count for a syndrome exceeds the 99% confidence interval. Note: ESSENCE – ANCR uses syndrome categories consistent with CDC definitions.

Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.

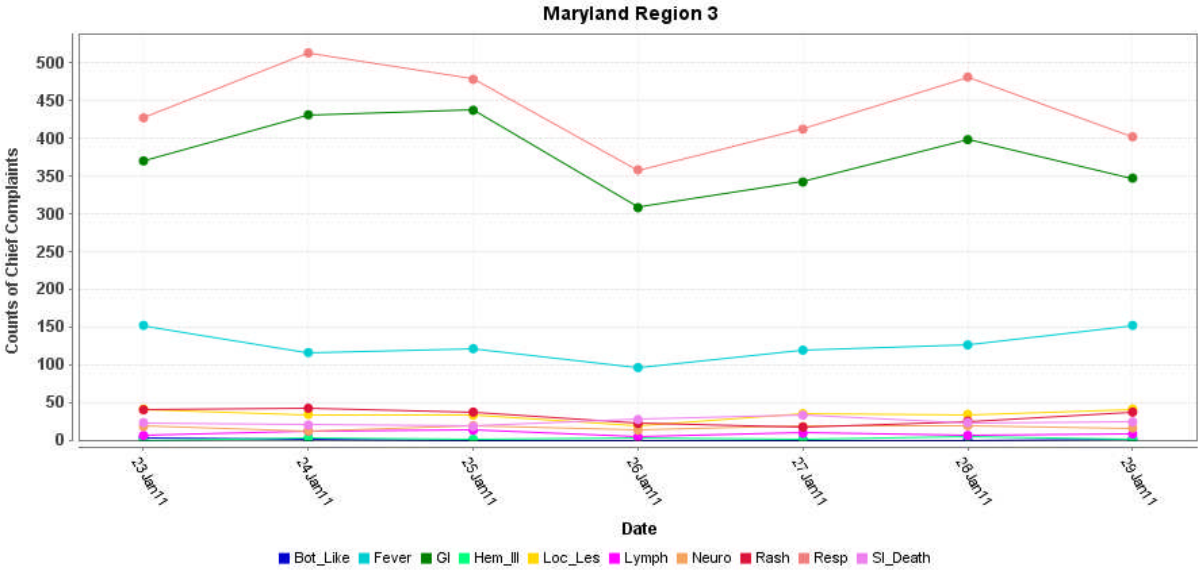


*Includes EDs in all jurisdictions in the NCR (MD, VA, and DC) reporting to ESSENCE

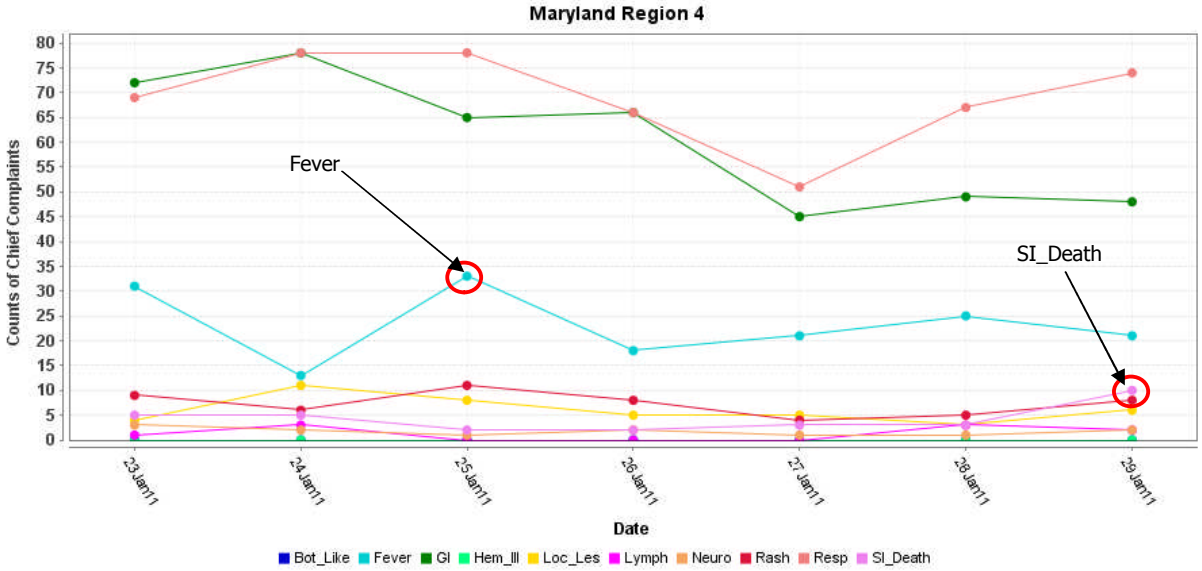
MARYLAND ESSENCE:



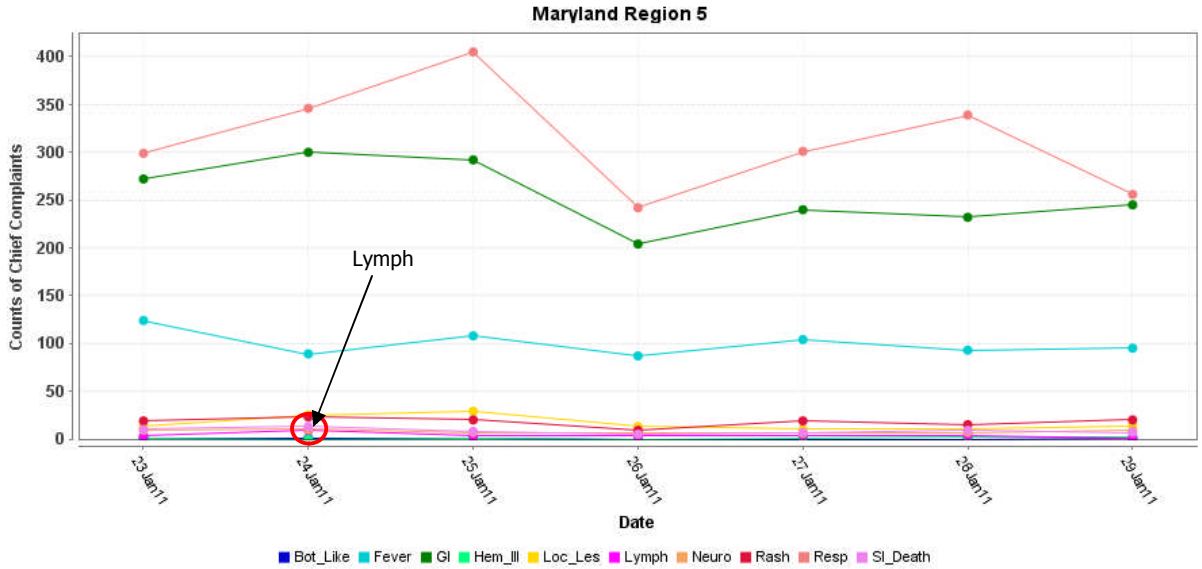
* Region 1 and 2 includes EDs in Allegany, Frederick, Garrett, and Washington counties reporting to ESSENCE



* Region 3 includes EDs in Anne Arundel, Baltimore City, Baltimore, Carroll, Harford, and Howard counties reporting to ESSENCE



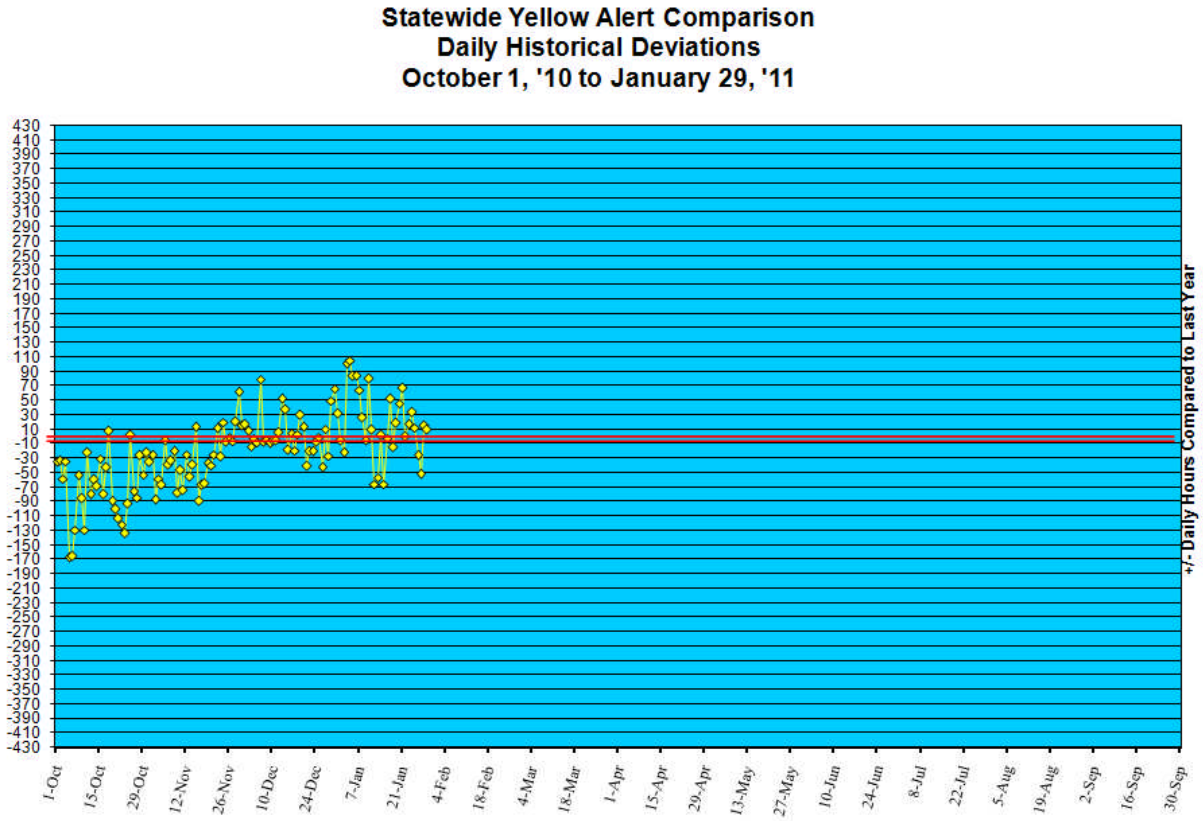
* Region 4 includes EDs in Cecil, Dorchester, Kent, Somerset, Talbot, Wicomico, and Worcester counties reporting to ESSENCE



* Region 5 includes EDs in Calvert, Charles, Montgomery, Prince George's, and St. Mary's counties reporting to ESSENCE

REVIEW OF EMERGENCY DEPARTMENT UTILIZATION

YELLOW ALERT TIMES (ED DIVERSION): The reporting period begins 10/01/10.



REVIEW OF MORTALITY REPORTS

Office of the Chief Medical Examiner: OCME reports no suspicious deaths related to an emerging public health threat for the week.

MARYLAND TOXIDROMIC SURVEILLANCE

Poison Control Surveillance Monthly Update: Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in December 2010 did not identify any cases of possible public health threats.

REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):

Meningitis:	**Aseptic**	**Meningococcal**
New cases (January 23 – January 29, 2011):	5	0
Prior week (January 16 – January 22, 2011):	11	0
Week#4, 2010 (January 24 – January 30, 2010):	13	0

Eleven outbreaks were reported to DHMH during MMWR Week 4 (January 23 – January 29, 2011):

4 Gastroenteritis outbreaks

3 outbreaks of GASTROENTERITIS in Nursing Homes
1 outbreak of GASTROENTERITIS in an Assisted Living Facility

1 Foodborne outbreak

1 outbreak of GASTROENTERITIS/FOODBORNE associated with a Restaurant

5 Respiratory illness outbreaks

1 outbreak of INFLUNEZA in a Nursing Home
1 outbreak of ILI in a Nursing Home
1 outbreak of ILI in a School
1 outbreak of ILI/PNEUMONIA in a Nursing Home
1 outbreak of ILI/PNEUMONIA in an Assisted Living Facility

1 Rash illness outbreak

1 outbreak of SCABIES in an Institution

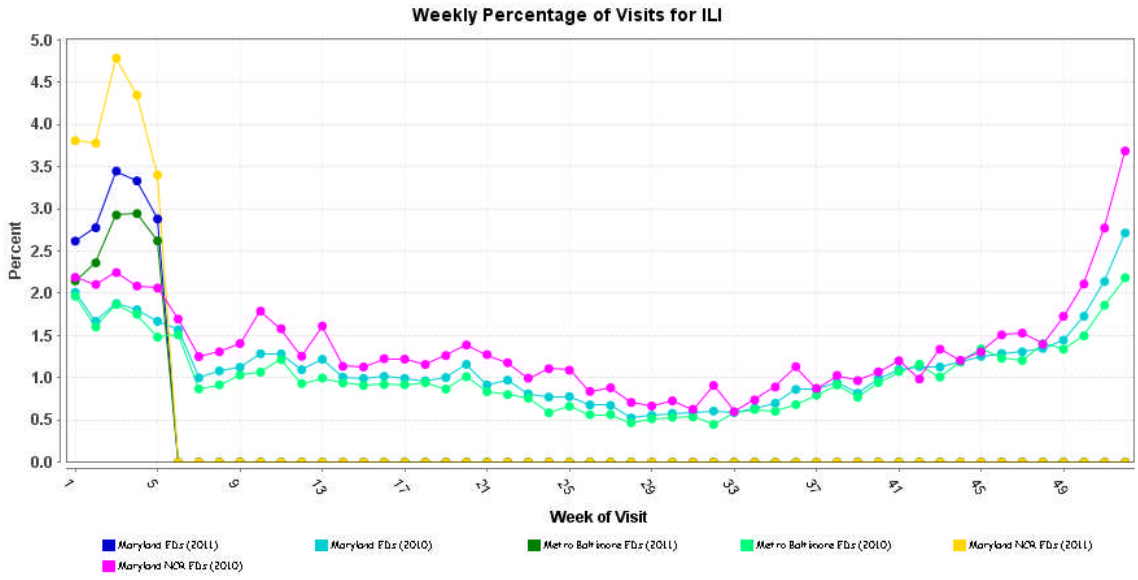
MARYLAND SEASONAL FLU STATUS

Seasonal Influenza reporting occurs October through May. Seasonal influenza activity was WIDESPREAD for Week 4.

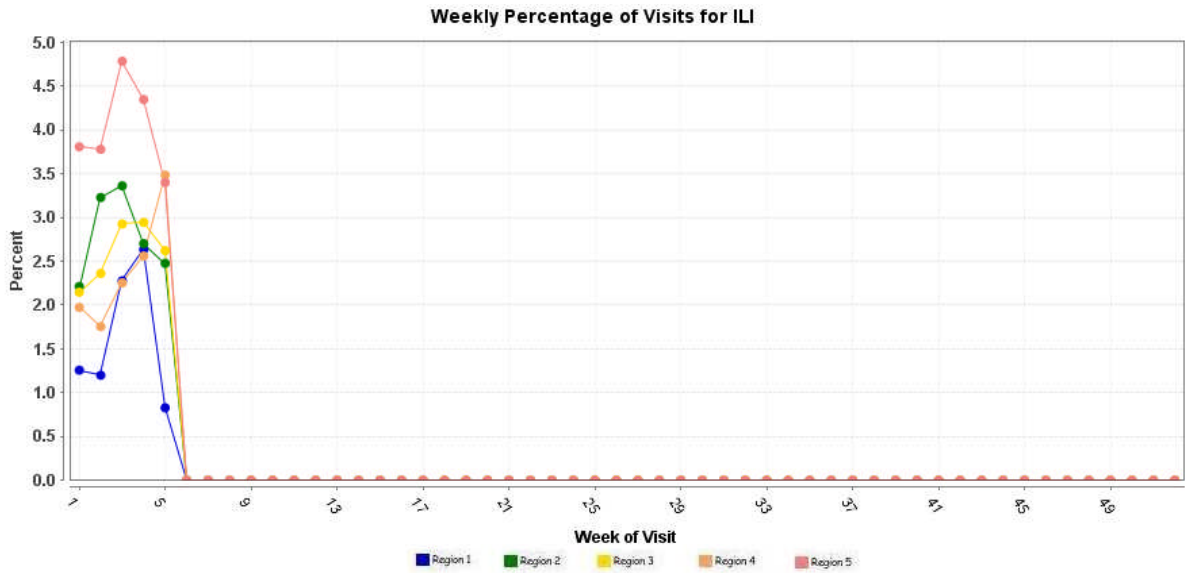
SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS

Graphs show the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. These graphs do not represent confirmed influenza.

Graphs show proportion of total weekly cases seen in a particular syndrome/subsyndrome over the total number of cases seen. Weeks run Sunday through Saturday and the last week shown may be artificially high or low depending on how much data is available for the week.



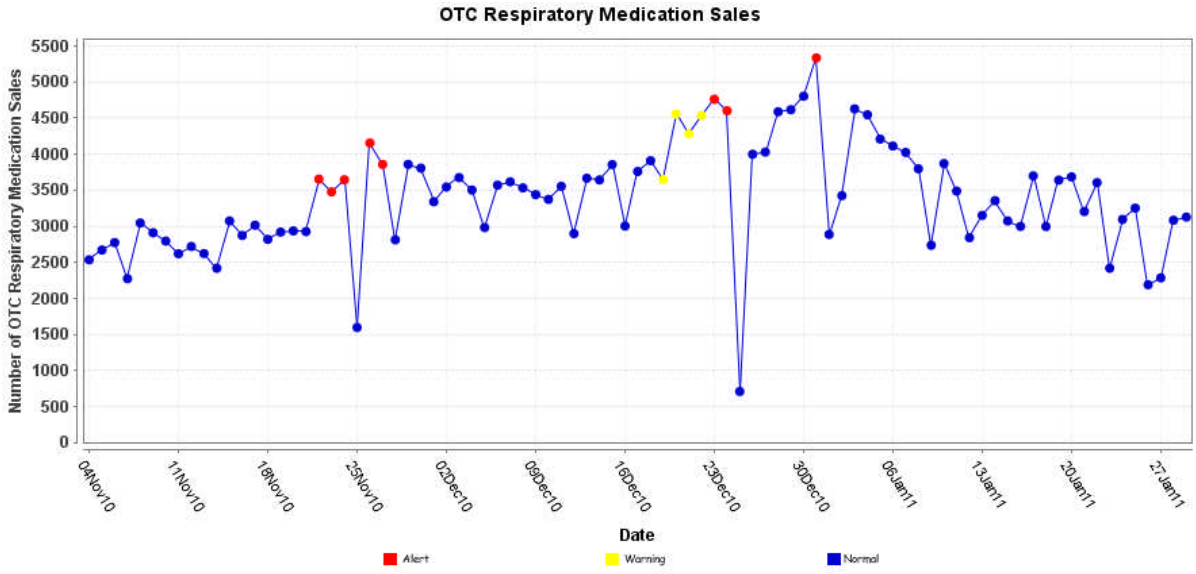
* Includes 2010 and 2011 Maryland ED visits for ILI in Metro Baltimore (Region 3), Maryland NCR (Region 5), and Maryland Total



*Includes 2011 Maryland ED visits for ILI in Region 1, 2, 3, 4, and 5

OVER-THE-COUNTER (OTC) SALES FOR RESPIRATORY MEDICATIONS:

Graph shows the daily number of over-the-counter respiratory medication sales in Maryland at a large pharmacy chain.



PANDEMIC INFLUENZA UPDATE / AVIAN INFLUENZA-RELATED REPORTS

WHO update: The current WHO phase of pandemic alert for avian influenza is 3. Currently, the avian influenza H5N1 virus continues to circulate in poultry in some countries, especially in Asia and northeast Africa. This virus continues to cause sporadic human infections with some instances of limited human-to-human transmission among very close contacts. There has been no sustained human-to-human or community-level transmission identified thus far.

In **Phase 3**, an animal or human-animal influenza reassortant virus has caused sporadic cases or small clusters of disease in people, but has not resulted in human-to-human transmission sufficient to sustain community-level outbreaks. Limited human-to-human transmission may occur under some circumstances, for example, when there is close contact between an infected person and an unprotected caregiver. However, limited transmission under such restricted circumstances does not indicate that the virus has gained the level of transmissibility among humans necessary to cause a pandemic.

As of January 20, 2011, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 518, of which 306 have been fatal. Thus, the case fatality rate for human H5N1 is approximately 59%.

AVIAN INFLUENZA, POULTRY (JAPAN): 29 January 2011, Chickens at a poultry farm in Toyohashi, Aichi Prefecture, have tested positive for avian influenza, the prefectural government said Thursday [27 Jan 2011], confirming the 5th outbreak this winter. Authorities started slaughtering all 150,000 chickens at the farm and banned transport of the estimated 2.6 million chickens and eggs at the 44 poultry farms within 10 km [6.2 miles] of it, including part of neighboring Kosai, Shizuoka Prefecture. Officials are now seeking land to bury the carcasses. The Aichi Prefectural Government said earlier in the day that the chickens had tested negative for bird flu but revised that finding after data from the National Institute of Animal Health showed they were infected with a highly virulent H5 strain, according to prefectural officials. About 800 birds died between Sunday [23 Jan 2011] and Wednesday [26 Jan 2011] at the chicken farm, and 4 out of a sample of 5 birds tested positive, the prefectural government said. The poultry house where the dead birds were found had no windows, denying easy access to wild birds. The outbreak raised serious concerns among local poultry farmers. "If the outbreak continues, it will lead some farmers to pull out of the business due to fears for their future," said a senior official in Toyohashi's chicken farm cooperative. "We want the central government to consider lifting the ban on use of vaccines currently prohibited in Japan," the 75-year-old official said. Aichi is a major grower of egg-producing hens. As of February 2009, the prefecture had roughly 7.45 million chickens, the 3rd most in the country. Prior to the Aichi case, bird flu was confirmed at poultry farms in Shimane, Miyazaki and Kagoshima prefectures, while the virus has been detected in wild birds at several sites. At a farm in Shintomi, Miyazaki Prefecture, local authorities finished killing 410,000 chickens at 12 farm structures Thursday afternoon [27 Jan 2011], the prefecture said. The avian flu virus was confirmed Monday [24 Jan 2011] at those farms. In the same afternoon, the central government convened an emergency meeting to discuss how to deal with the outbreaks. "If it is highly likely that wild birds are spreading the flu virus, we have to order poultry farms to implement thorough preventive measures so their birds will not contract the flu from wild birds," Prime Minister Naoto Kan told his ministers. The agriculture ministry also dispatched officials to Aichi Prefecture to start investigating the cause. In Toyohashi, the avian flu virus was detected at quail farms in 2009, prompting the prefectural government to slaughter 1.6 million quails.

AVIAN INFLUENZA, HUMAN (EGYPT): 28 January 2011, Dr. Abdel Rahman Shahin, spokesman for the [Egyptian] Ministry of Health, announced that today [Wed 26 Jan 2011] discovery of a new human case of bird flu [avian influenza A/(H5N1) virus infection] has been identified. The case is a 7-year-old child resident in the Gharbia governorate. This is the 122nd case since the onset of the disease in Egypt in 2006, and the 4th confirmed case in 2011. Shahin stated that the child had been admitted to a hospital in the Gharbia Governorate suffering from fever, sore throat, cough and muscle and joint pain. He had been exposed to domestic birds (chickens) and was suspected to be suffering from bird flu. The patient has received Tamiflu treatment and is in stable condition.

NATIONAL DISEASE REPORTS

HANTAVIRUS (NEW MEXICO): 24 January 2011, The New Mexico Department of Health announced today [23 Jan 2011] that a 51-year-old woman from McKinley County is hospitalized in critical condition at UNM [University of New Mexico] Hospital in Albuquerque with the state's 2nd diagnosed case of hantavirus pulmonary syndrome [HPS] this year [2011]. An environmental investigation will be conducted to determine where the woman may have been exposed to the virus. "Cases of hantavirus [infection] in the winter are not as common as in spring and summer and are usually due to rodents seeking shelter and food in homes and other buildings due to the cold weather," said Dr Paul Ettestad, the Department of Health's public health veterinarian. "Being aware of your surroundings so that you avoid disturbing areas of rodent infestation, rodent nests, and droppings is very important along with making sure your house is sealed up so that rodents cannot enter." People can become infected and develop disease from hantaviruses when they breathe in aerosolized virus particles that have been transmitted by infected rodents through urine, droppings, or saliva. The deer mouse is the main reservoir for the strain of hantavirus that occurs in New Mexico, Sin Nombre virus. The Department of Health urges health-care workers and the general public to familiarize themselves with the symptoms of hantavirus [infection]. (Emerging Infectious Diseases are listed in Category C on the CDC List of Critical Biological Agents) *Non-suspect case

TULAREMIA, WILDLILFE (TEXAS): 27 January 2011, Researchers at Texas Tech University's Institute of Environmental and Human Health warned area farmers, ranchers, and hunters Monday [24 Jan 2011] to use caution when handling wild game after finding evidence of the bacterium that causes tularemia in feral hogs in Bell and Coryell [and Crosby] Counties [in Texas]. Tularemia is a serious infectious disease caused by the bacteria *Francisella tularensis*, said Steve Presley, a zoonotic disease researcher who leads the team that tested about 130 feral hogs from Bell, Coryell, and Crosby counties [in Texas]. Rodents and

wild game animals as well as mosquitoes, deer flies, and ticks, can carry tularemia, which is commonly known as rabbit fever, he said. 15 percent of the feral hogs from the 2 Central Texas counties and 50 percent of those from Crosby County showed evidence of current or past infection, he said. "We have found high levels of antibodies in these pigs that show they have been infected with *Francisella tularensis* and found that some of these pigs were actively infected with it," Presley said. "The bacteria are constantly present in animals in this area and in the feral hog population, but normally it's only a small number of cases. This is a huge number of infected animals." What the researchers have yet to determine is the subspecies of bacteria infecting the hogs. The type B subspecies can cause illness in wildlife, domestic animals, and humans, but poses a less serious health threat to humans, Presley said. But the type A subspecies can be lethal to humans, he said, and the US Centers For Disease Control and Prevention [CDC] considers it a viable bio-weapons agent. Regardless of which type it turns out to be, Presley says anyone who may come into contact with wild animals -- especially those that might hunt or eat wild hogs -- should be cautious. "If you are handling, cleaning, or eating wild game, particularly hogs, deer, or rabbits, you should be wearing rubber gloves and eye protection when you're dressing wild game," he said. "The bacteria can enter any sort of small cut or hangnail. During this time of year, it might not be as big of an issue, but you should check yourself for ticks, wear tick repellent, and avoid biting flies, including mosquitoes." Presley also recommends making sure game meats are thoroughly cooked before eating them and says homeowners and lawn care professionals should look for wild rabbit nests hidden in tall grasses prior to mowing. [There was a case in Washington of a man running over an infected rabbit while mowing his grass and getting exposure, presumably from inhalation of aerosolized carcass]. The discovery was made while the researchers were looking for brucellosis. They found no evidence of that disease, and were surprised to find evidence of tularemia, said Brad Dabbert, associate chairman of Texas Tech's Department of Natural Resources Management. "Traditionally, it's a rabbit disease, but it does get reported in birds and other mammals," Dabbert said. "Since hogs can range over large areas, it's certainly possible that they can transport this stuff. That's kind of the critical issue now. The other thing we're trying to do is look for it in other animals now to more accurately answer that question," he said. Between 2000 and 2008, only 8 human cases of tularemia were reported in the state and about 125 are reported each year in the USA, Texas Tech said Monday [24 Jan 2011]. Texas AgriLife Extension Service says feral hogs can be found in 230 of Texas' 254 counties and cause annual damage of nearly USD 400 million. (Tularemia is listed in Category A on the CDC List of Critical Biological Agents) *Non-suspect case

CHOLERA (MASSACHUSETTS): 27 January 2011, A healthy 30-year-old male resident of Boston, Massachusetts attended a wedding in a resort in the Dominican Republic from 20-23 Jan 2011. He returned to Boston at 1 am on 24 Jan 2011. He was awoken from sleep at 5 am 24 Jan 22011 with watery diarrhea. Over the next 36 hours he had approximately 12 bowel movements, small to moderate volume without fever or blood in the stool. His wife who accompanied him to the wedding has remained well. The patient reports he was contacted by his family who also attended the wedding, and that at least 13 members of the wedding party had developed watery diarrhea and were presenting to medical care in Venezuela and the Dominican Republic with "probable cholera" (no additional details available). The patient presented to the Massachusetts General Hospital on 25 Jan 2011. He was afebrile and with no dehydration to examination. He was walking, nontoxic, mucus membranes were moist, and he was urinating well. The frequency and volume of bowel movements were decreasing. The clinical diagnosis was possible *Vibrio cholerae* O1, presumably extension of Hispaniola outbreak. The patient was treated with fluids ad libitum, and azithromycin 1 gm orally. Stool was sent for culture, and, on 27 Jan 2011, has yellow colonies on TCBS [thiosulfate citrate bile salts sucrose] agar. Gram stain shows comma shaped Gram negative rods. The organism is oxidase positive. Formal identification is in process and should be available soon. The Massachusetts Department of Public health has been notified of a possible case of *V. cholerae* O1 infection and a sample is being sent to the State Laboratory. (Water Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

INTERNATIONAL DISEASE REPORTS

CHOLERA (VENEZUELA): 28 January 2011, It was a lavish Dominican wedding with 500 guests, some flying in from Madrid, Mexico and Boston. But now some guests are saying the lobster at last Saturday's [22 Jan 2011] wedding at an exclusive resort gave them cholera. Dominican Health Minister Bautista Rojas said 37 of the guests have tested positive for cholera and officials are trying to track down the rest for testing. Rojas said the lobster was purchased in Pedernales, a town that borders Haiti, which shares the island of Hispaniola with the Dominican Republic. Venezuelans returned from the wedding with cholera-like symptoms, putting the country in a near panic. The country quickly quarantined the ill, and tried to reassure its people that they had the situation under control. "We have suspected and confirmed cases of cholera in the country," Venezuelan Health Minister Eugenia Sader said during a press conference. "We can rest easy. We have an excellent water distribution network and all we are asking is that everyone takes appropriate precautions. 4 others who were ill returned to Spain, Mexico and Boston and are "being taken care of at this time," Sader said. The ill included a Dominican businessman whose family owns the exclusive Cap Cana resort [not the resort where the wedding banquet took place]. (Food and Water Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

CHOLERA (HAITI): 28 January 2011, The death toll from Haiti's cholera epidemic has risen to at least 4,030 more than 3 months after the disease broke out in the country's Artibonite Valley, the health ministry said. The number of cholera cases in Haiti totaled 209,034 as of 24 Jan 2011, the ministry said. The severity of the epidemic has diminished over time, but the ministry's figures show that Haitians are still dying from the bacterial infection, which can strike swiftly with intense diarrhea and vomiting leading to dehydration and sometimes death. (Water Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

CHOLERA (DOMINICAN REPUBLIC): 24 January 2011, The Dominican Republic announced the country's 1st recorded death from the disease on Mon 24 Jan 2011. The health ministry said the total number of infections has risen from 152 to 238 since early January 2011, compared to an average of 30 new cases a week in December 2010. The ministry said the 53-year-old victim had

not seen a doctor, despite suffering from vomiting and diarrhea for several days. (Water Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

YELLOW FEVER (COTE D'IVOIRE): 26 January 2011, On 3 Jan 2011, the Minister of Health in Cote d'Ivoire notified WHO of a yellow fever [YF] outbreak in the north of the country. As of 17 Jan 2011 a total of 12 cases tested IgM positive by ELISA at the Institut Pasteur of Abidjan and were subsequently confirmed positive for yellow fever by the regional reference laboratory, the Institut Pasteur of Dakar (by ELISA and PRNT [plaque reduction neutralization test]). These cases originate from Beoumi and Katiola districts, in the Bandama Valley Region in the centre of the country, and Seguela and Mankono in the Worodougou Region in the north of the country [more accurately north-central]. In response to this outbreak, a field investigation was conducted in Beoumi and Katiola districts from 10-15 Jan 2011 by the Ministry of Health with support from the WHO country office. During this investigation a total of 64 suspected cases, including 25 deaths, were identified. Further laboratory testing is ongoing. On 22 Jan [2011], the Ministry of Health of Cote d'Ivoire started an emergency vaccination campaign targeting over 840,000 people aged 9 months and older in Beoumi, Katiola, Mankono, and Seguela districts, with support from WHO and UNICEF. Global Alliance for Vaccines & Immunisation (GAVI)-funded vaccines released by the International Coordinating Group on Yellow Fever Vaccine Provision (YF-ICG) for the 2010 country mass preventive campaign will be used. The 4 districts were part of the 61 districts chosen for the preventive campaign, which could not be conducted last year [2010] due to the political situation. (Viral Hemorrhagic Fever is listed in Category A on the CDC List of Critical Biological Agents) *Non-suspect case

CRIMEAN_CONGO HEMORRHAGIC FEVER (INDIA): 23 January 2010, Two more cases of the Crimean Congo hemorrhagic fever (CCHF), which has already claimed 3 lives in Ahmedabad in the past fortnight, were detected on Friday [21 Jan 2011], taking the number of confirmed cases to 5. While one of them is the husband of CCHF's 1st victim, the 2nd is a male nurse at Shalby Hospital, where patients of the near-fatal infection were treated earlier. The National Institute of Virology in Pune has confirmed that the 23-year-old male nurse, working in Shalby Hospital, has been infected with the virus. . (Viral Hemorrhagic Fever is listed in Category A on the CDC List of Critical Biological Agents) *Non-suspect case

OTHER RESOURCES AND ARTICLES OF INTEREST

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: http://preparedness.dhmh.maryland.gov/

Maryland's Resident Influenza Tracking System: http://dhmh.maryland.gov/flusurvey

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NOTE: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail me. If you have information that is pertinent to this notification process, please send it to me to be included in the routine report.

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